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JC 680 426

By- Moen, Norman W., Ed.; Stave, Roman L., Ed.

Minnesota Junior College Faculty Interests and Concerns: Proceedings of a Conference of Instructors in Natural Science and Occupational Education (Minneapolis, March 24-26, 1968).

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Natural Science and Occupational Education

March 24-26, 1968



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Norman W. Moen, Ramon L. Stave
EDITORS

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Natural Science and Occupational Education
March 24-26, 1968**

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SECTION 1

INTRODUCTION

For a good many years before the establishment of the Minnesota State Junior College system, the University sought various solutions to the problem of developing throughout the State a broad-based system of educating college freshmen and sophomores. The problem was especially serious in the Twin City area, where the University needed assistance in reducing its commuting population at the freshman and sophomore levels.

Almost traditionally, fifty percent of the students entering the Liberal Arts College of the University have not proceeded beyond the sophomore year. The need to provide through some alternative system an introductory college education, together with effective selection of students for senior-college work, became evident as early as 1950.

The recognition of this need meant no disrespect for the importance of the freshman and sophomore years of collegiate work. It meant simply that, if the University were to fulfill its assignment in undergraduate, professional, and graduate education, it would need major assistance in undergraduate education, especially at the lower-division level.

As early as 1955, President Morrill requested that I make a study of the University extension-center systems of Indiana, Purdue, and Ohio State universities. In Indiana, for example, all junior college education is provided through a widespread system of freshman-sophomore extension centers operated by Indiana and Purdue universities. Clearly, such a system was one model for Minnesota to follow in providing junior college education.

The principal difficulty in establishing junior college programs supported by the school districts in the Twin City area was that the two major districts each lacked funds for such a program. It was therefore necessary to find some kind of State-supported alternative program. By the time of the 1957 Legislative Session, however, the interest in junior colleges around the State had become so great that the University shelved the notion of proposing a system of University-operated extension centers so as not to confuse the debate about how the State should provide junior college education. The development of junior colleges in school districts was stimulated, as you will recall, by the provision of State subsidy to each student attending a junior college. This sum was enlarged in consecutive legislative sessions, so that school districts found it increasingly attractive to establish junior-college programs. Unfortunately, the problem of establishing junior-college programs adequate for the Twin City area remained unsolved.

The 1960 census confirmed fully what we had been assuming — namely, that we had changed from a state in which one-half of the population lived in the eastern half and the other half in the western half to a state in which two-thirds of the population lived in the eastern half. Moreover, a disproportionately large fraction of the people living in the eastern half belonged to the college-age and high-school-age group. It became perfectly clear that the State had to make an all-out effort to solve the resulting problem of higher education.

The solution that emerged from the Legislature was the State Junior College system. This system, which made the financial status of any school district relatively immaterial to the decision to establish a junior college, has been especially beneficial to the Twin City area. Indeed, in the current year, we have begun to see the initial effect of the development of junior colleges in the greater metropolitan area on the University's freshman enrollment. These junior

colleges are expected to take eventually thirty to thirty-five thousand freshmen and sophomores. The University of Minnesota will therefore find it increasingly possible to refine its mission — to give major attention to upper-division, graduate, and professional education. This refinement does not mean that the University will withdraw from freshman and sophomore education; it means merely that the freshmen and sophomores enrolled on the Twin City campuses will come to constitute a smaller proportion of the student body — thirty-five to forty-five instead of the present fifty percent.

As the process of refinement develops, the University must find a way to mesh its work with the work of the junior colleges and the state colleges. This task presupposes increasing sensitivity to the programs that are being developed in all three kinds of institutions. The transfer of students from one kind of institution to another is going to become more and more frequent. It is therefore incumbent on all of us to establish programs that entail a minimum disadvantage in transfer and a maximum incentive for a student to initiate his work in a junior college.

To this end the University is seeking to develop a pattern of controlled growth which will not segregate students into intellectual strata. Up to now, we have not considered the California system adaptable to Minnesota. We do not think that high-school graduates should be forced to enroll at a certain institution of higher education merely because of the selectivity of other institutions in the public system of higher education. We trust that our approach will result in there being quality students in all public institutions of higher education in Minnesota.

The University has also tried, as vigorously as it knows how, to help fill the need for strong staff, adequate salaries, good libraries, and quality facilities for all public institutions of higher education in the State. Second-rate education cannot be regarded as the birthright of any student in our State. It is incumbent upon all of us to work together to enable any student to enter the public system of higher education at a point that is in his best interest.

This is a very brief summary of the University's attitude and responses to the development of the junior colleges over the past twenty years. We hope to work in every possible manner with you and your associates to assist in the development of curricula, the experimentation with curricular innovations, and the training of a staff who regard junior college work as an exciting challenge to lifetime employment.

We are delighted to be working with the Minnesota Junior College system in this present symposium, and we hope that this is only the beginning of an increasingly warm working relationship between these two important partners in higher education in the State.

Stanley J. Wenberg
Vice President, Educational
Relationships and Development

University of Minnesota
March, 1968

SECTION 2

Science, Technology, and the Junior College

Norman C. Harris

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INTRODUCTION

The stresses and strains on modern scientific and industrial societies present awesome challenges to higher education. The modern era of technical change, overpopulation, rising expectations, and shrinking space possesses many characteristics entirely unknown in previous times, so that the experience of the past frequently fails to point any directions for the future. We all live in the same old stadium, but we are in a brand-new ball game, with new players and new rules. Most of the players are under thirty. Most of the rules have been written in the age of the electron, the atom, the transistor, and the pill. The fans would like to see a world-wide league, but the players themselves aren't buying it; they are more fiercely nationalistic than ever. In the jet age the whole world is the playing field, and we who try to be coaches can no longer diagram the plays from anybody's selected list of Great Books.

It is this set of new conditions which has necessitated changes in higher education; and among all the educational changes of this century none has excited more comment or given greater promise than the development of the junior college in America.

I. A LOOK TO THE FUTURE

The past has been the infancy of the junior college; the present reveals a growth which evokes surprise everywhere, and even a little alarm in some quarters; and the future is still clouded as we look toward the twenty-first century. The next thirty years will be years of innovation on the one hand and maturation on the other — years of stress and strain, of potential and promise, of fruition and frustration, of challenge and change.

Thinking about the future has become such an integral part of science, engineering, economics, business, and government that nearly one billion dollars per year is now being spent on crystal-ball gazing by professional futurists in the United States. Some of our best scientific and philosophical minds are trying to forecast the future. So-called "think companies" are big business today, and they own the largest crystal balls in history. Here are some of the images they see in them for the year 2000 A.D.

People: In spite of the pill, by the turn of the century the population of the United States will have risen over 300 million, registering a net increase of 50 percent over today's 200 million. Jobs for unskilled workers will have virtually disappeared, and today's mechanization and automation will bear (thanks to cybernetics) about the same resemblance to those of the year 2000 as the Wright brothers' airplane does to supersonic transport. People will still work, but the work will be less manual and more cognitive. Higher education and training, important today, will be absolutely essential then. As John Kenneth Galbraith has suggested in his new book, *The New Industrial State*, science, industry, education, and the state will be partners in trying to effect social progress.

Transportation: Traffic congestion may not disappear by 2000 — and you probably still won't be able to find a place to park — but great advances will have been made in rapid mass

transit. There will be more and more underground and overhead highways, some with automated traffic control. Electric cars, deriving energy from new distribution systems, may replace most of today's engine-driven cars. The railroads may make a comeback in the next two decades, using monorail equipment for short runs and 150-mile-per-hour trains on engineered roadbeds for long runs. New supersonic passenger aircraft are already being tested, and huge planes carrying 1,000 or more passengers may span continents and oceans within the next ten years. By 2000, ballistic rockets may whisk passengers from New York to Rio in thirty minutes. Even the dreamers discount the possibility of routine lunar vacations, but there is good reason to expect that the moon will have a permanent spaceport and that men will have landed on both Venus and Mars by the time the strains of *Auld Lang Syne* welcome the twenty-first century.

Health and Longevity: By 2000, bacterial and virus diseases will probably have come under complete control. Cardiovascular disease will be susceptible to vastly improved methods of treatment, and medical researchers hope to solve the enigma of cancer before the end of the century. The problem of growing old will remain, but organ transplants and advances in geriatrics may make nonagenarians a more familiar sight than they are now. Geneticists are confident that DNA research will eventually enable man to become the only animal that can direct his own evolution. The moral and educational problems posed by this prospect are almost too big for the human mind to grasp.

Education: The President's Commission, established during Mr. Truman's administration, came to the conclusion in 1947 that nearly fifty percent of our youth is capable of profiting from two years of post-high-school education.¹ The term "community college" was first used in this report. *The Second Report to the President*, submitted during Mr. Eisenhower's administration in 1957, went even further in suggesting new directions in higher education, and it pointed up the fallacy of certain hallowed beliefs still held about education — such as the belief that practical education or vocational training is all that workers need. Work in the modern world is increasingly cognitive; and being so, it is more and more like higher education.

Futurists see 1980 as the date for the near-disappearance of jobs for unskilled workers, and I think they are not at all fanciful in predicting that by the 1970's nearly fifty percent of the labor force will be working in jobs for which junior college training for one, two, or even three years might be the minimum preparation.

America is ready for a quantum jump in education. The high-school diploma, which for half a century has represented the general standard of education in America, is no longer sufficient. By 1980, higher education may be in the picture for almost all youth.² And there will also be new directions in higher education. The liberal arts and humanistic studies, though they will most certainly remain essential elements of higher education, will have to move over and make more room for education in the applied arts. Aristotle's famous dictum that "the proper aim of education is the wise use of leisure" describes what has been, not what is, nor what will be. Higher education for the present (and the future) is a preparation for life's work, not a means of getting out of work for life.

Man Versus Man: If these and other equally dramatic changes occur in the next three decades, where will man find his place as an individual? Does each new man on earth diminish the individuality of other men? As man is no longer driven to conquer frontiers or to eke out his living by toil — as disease and poverty come to be feared less and less — what will replace present drives and fears? If, indeed, man acquires sufficient knowledge to control his own evolution, how moral will he be in using this knowledge? In particular — and

¹ *Higher Education for American Democracy*, The Report of the President's Commission on Higher Education (New York: Harper and Brothers, 1947).

² See Earl J. McGrath, *Universal Higher Education* (New York: McGraw-Hill Book Company, Inc., 1966).

here is where I feel great concern — what will happen to *individual rights* in the new industrial state? Will we have bought economic abundance and physical comfort at the price of freedom? If (to paraphrase Shakespeare) the uses of adversity are sweet, what happens to man when adversities are removed? Does man himself then become his only adversary?

You and I live in an age and work in a profession in which education is generally assumed to be the referee in the coming confrontation of man with man. This assumption (and believe me, it is merely an assumption) is being tested today on every college campus in the nation; and, as we well know, it frequently fails to meet the test. There is a disturbing question whether or not education is the answer to society's critical problems. When college students take the lead in breaking the law, in formulating plans to dodge the draft, in displaying intolerance for the views of others, and in painting four-letter *graffiti* on university buildings — then there is good reason to doubt the validity of the assumption. Aren't we failing in higher education and trying to hide our failure by invoking convenient phrases such as "the generation gap," "Johnson's war," and "the new morality" or by spouting vapid imperatives such as "Don't trust anybody over thirty" and "Everybody has to do his own thing"?

The junior college movement is where much of the action is, and the next thirty years will determine whether the junior college action can help to solve rather than exacerbate the critical problems of our time.

II. PURPOSE AND PROGRAM OF THE PUBLIC JUNIOR COLLEGE

The junior college is developing as an institution with a threefold purpose: (1) to provide academic, liberal, pre-professional education for students headed for bachelor's degrees; (2) to provide occupational education for students planning to take jobs performed by the so-called "middle-level manpower"; and (3) to provide general education for all who have the desire and the perseverance to profit from it.

The Academic, or College-Parallel, Program

Most two-year colleges consider the provision of a quality program of lower-division instruction in the liberal arts and sciences to be one of their major functions. The terms "college-parallel program" and "transfer program" are used to denote this kind of instruction.

In addition to a full range of freshman and sophomore courses in the liberal arts and sciences, many larger junior colleges also provide pre-professional sequences of courses designed to prepare students for upper-division work in such diverse fields as business administration, agriculture, engineering, architecture, nursing, teaching, forestry, police science, and other fields.

Hardly anything in America is prized more than a bachelor's degree from a good college. The keen desire of youth for this degree, a desire fomented by their parents, creates a maze of problems for those persons in junior colleges whose major responsibility is planning and carrying out a college-parallel program of education. Students entering junior colleges as freshmen may range in ability from an I.Q. of 160 down to an I.Q. of 85, and in expectation from pre-professional education through quick training for a specific job to no particular education or training at all.

With such a diverse group of students (and nonstudents) in hot pursuit of the fox among the rocky hedgerows of Academe, it is no wonder that many of them are unhorsed at the first jump. Those whose fall is not too traumatic may come back to join a large group who wisely elect to take some riding lessons before the hunt. *Remediation* within the transfer program takes many forms, including basic English, developmental reading, mathematics review courses, and orientation courses. The term "salvage function" is commonly used in reference to the process by which the community junior college readies the unprepared student for *bona-fide* college-level study in the transfer program.

The necessity to provide a rich variety of courses and programs for middle-level *transfer* students is readily apparent — so apparent that it hardly needs verbal justification. There are, however, those who feel that emphasis on *collegiate-technical* and other *occupational* programs will somehow water down the academic or transfer program; that spending effort and money on students in occupational programs is somehow a prostitution of traditional higher education; and that the mere presence on campus of students learning to be secretaries, accountants, electronic technicians, engineering aides, or auto mechanics will somehow contaminate the pure and unsullied stream of academic endeavor associated with the transfer program. As a matter of fact, the presence of a good occupational program enhances the transfer program. I need not tell you what happens in a course in calculus, general chemistry, or business administration when half of the students enrolled in it have neither the ability nor the scholarly dedication to perform at the level implicit in college-transfer status. Good occupational programs, combined with *good counseling and guidance* (and by “good counseling and guidance” I mean counseling and guidance that are, to a certain extent, directive) can result in greatly improved college-transfer courses and programs.

But the real reason for providing quality programs of occupational education, however they may indirectly benefit the transfer program, is need — the need of students for post-high-school training to make them competent to hold jobs in a technological era; the need of employers, and of the nation generally, for technically trained personnel; and the need to upgrade the education of the general population from the level represented by the high-school diploma to the level represented by two years of college study — a level that will be the norm by 1980.

Look at it this way: a transfer-oriented junior college serves as an excellent one-way valve for the flow of bright young people to another place, while a comprehensive junior college provides educational channels for youth who will become productive members of the local community. What do you want to invest in — youth for export or youth for local community development?

III. OCCUPATIONAL EDUCATION IN THE JUNIOR COLLEGE

The surge of science and technology has brought about a situation in which almost all work *which men do* has cognitive content. Noncognitive work is being accomplished more and more by machines. As a result of the technological revolution, a completely new spectrum of occupations has developed between the professional and managerial jobs on the one hand and the trades and crafts on the other. These new jobs have increased by the hundreds of thousands in the past three decades until today we find that such segments of the economy as manufacturing, business, agriculture, health and medicine, and public service are almost as dependent on the work of semi-professional and technical personnel as they are on the work of professionals. The term “middle-level manpower,” or simply “middle manpower,” has been proposed to denote those persons who work as semi-professionals and technicians in jobs which require both cognitive effort and manipulative skills.

The Spectrum of Middle Manpower

Loosely defined, “middle manpower” can be taken to mean that portion of the total manpower spectrum which is concerned with jobs in which cognitive effort and manipulative skills are more or less balanced. At one end of the middle-manpower band we find jobs which are nearly professional (e.g., the job of a technician in scientific research) and have a very high cognitive-to-manipulative ratio. At the other end we find jobs which are closely related to the skilled trades (e.g., the job of a television-service technician) and have a comparatively low cognitive-to-manipulative ratio. It may be said that middle-manpower occupations generally require post-high-school education and training for one, two, or three

years, but that they do not require a bachelor's degree of anyone who wishes to enter them and pursue them successfully.

Middle-manpower occupations engage from 10 to 15 million workers in America today, and by 1980 these occupations may engage as many as 25 or 30 million workers, possibly one third of the labor force of the nation. Five fields of economic activity provide most of the middle-manpower jobs: agriculture, business, health and medicine, industry-engineering-science, and human services.

Within these five fields are families or clusters of jobs involving different cognitive-to-manipulative ratios. Consequently, junior colleges should offer occupational-education programs and courses at different levels of rigor.

Job training *per se* is not the sole ingredient in occupational-educational programs leading to the Associate Degree. College-level occupational-education programs should — and most do — present a judicious mixture of courses in technical training, background theory and supporting subjects, and general education:

1. A core of specialized courses offering technical training in various fields is designed to make the student competent at a semi-professional, or very highly skilled, level of occupation. A student in the occupational program may be required to earn half of the total credit hours for the Associate Degree in such courses.
2. A core of courses in background theory and supporting subjects — a core different for each family or cluster of jobs involved in occupational programs — is coming to be recognized as a foundation for curriculum planning. Mathematics, physics, biology, chemistry, psychology, economics, accounting, graphics, and similar courses are found in this core.
3. There has been increasing support in recent years for a core of courses in general education for all students whose goal is an Associate Degree in any occupational-education program. This core of courses provides the students with a foundation for intellectual, social, and cultural growth. It broadens their educational base so that they can adapt to changing occupational and social conditions, and thus become active, useful citizens of a free society.

Chart I illustrates a model for core curriculum development.³ Note that both *scope* and *sequence* must be carefully evaluated, and that this requirement frequently necessitates the abandonment of classic or standard courses in mathematics, science, social studies, and the humanities in favor of courses developed especially for Associate-Degree candidates. For example, in a two-year program there is often not enough time for separate courses in history, economics, political science, and sociology. Yet it may be argued that a technician with two years of college training should learn something about each of these disciplines and their interrelations. He might do so in a completely new two-semester course in which he is confronted with subject-matter selected from all of these disciplines and encouraged to integrate his ideas about them.

Quality Within Diversity

I have referred to occupational *fields* on the one hand and to instructional *levels* on the other. Some further discussion of levels of course offerings is essential to the basic concept of the comprehensive community college. It is difficult, costly, and often distracting to provide a wide diversity of programs and courses and *to keep them all of high quality*. It is important, first of all, to realize that "quality" and "rigor" are not synonymous terms. *Rigor* has to do with

³ Originally prepared for a paper by the author in *Emphasis: Occupational Education in the Two-Year College* (Washington, D.C.: American Association of Junior Colleges, 1966).

the essential or inherent difficulty of the subject matter. *Quality* has to do with how well the course or curriculum meets its objectives. A rigorous course in theory of equations can be of low quality if it is not taught well, and a relatively noncognitive course in welding can be of high quality if it produces excellent welders.

To achieve quality within diversity requires administrative leadership and faculty commitment to the open-door college: to the concept that all youth are important — not just the bright ones; to the democratic idea that all work has dignity — not just cognitive work; and to the proposition that all areas of junior-college instruction are respectable — not just the academic fields.

It must be emphasized, however, that the phrase “open door” applies to the college and not necessarily to a particular course or curriculum. In fact, the open-door college may have many closed-door curriculums and courses. The guidance program is the foundation on which the open-door college can build a structure of quality within a framework of diversity.

A suggested guidance program is illustrated by Chart II.⁴ Note that several very important steps (some of them to be taken in the high school) must precede actual registration in courses. Students judged to be fully qualified may be enrolled at once in a transfer program or a collegiate-technical program or a general-education program. Students with serious deficiencies may be placed in a developmental program, where some will succeed so that they can move into a regular college program, and where others will come to realize that college work is outside their interests or beyond their abilities. Some students may decide, for economic reasons, to attend college in the evening, working during the day to support a family or to earn money for later full-time study. To establish and maintain a testing, interviewing, counseling, and orientation program like the one diagrammed is a major undertaking. It costs money, but it may well be the wisest investment the college makes. The paths of student flow on the chart indicate how students may move from one career or educational objective to another in accordance with their scholastic achievement and interests. The junior college should not only open the door to all youth but also help them find their way about the building. Inviting them to enter without guiding them before and after entering would be sheer mockery.

Levels of Courses Needed

Obviously, the needs of several levels or groups of students can be met only if several levels of courses and curriculums are available. The grouping of students according to the Minnesota State plan (from I-A through IV-B) shows a recognition of the necessity of differentiating students on the one hand and courses and curriculums on the other. I have recognized five levels or groups of students in my work with junior colleges from coast to coast:

1. *Bona-fide* university-parallel
2. Potential university-parallel, but in need of some remediation
3. Collegiate-technical — Associate-Degree occupational level
4. Vocational-technical — certificate level
5. Developmental level

In order to fulfill the promise of the open-door college, the counseling and guidance program must aim at placing students in courses at levels suited to their interests and abilities. The charts below illustrate this kind of placement in four programs involving four basic disciplines:

- Chart III — English program
- Chart IV — Mathematics program
- Chart V — Physics program
- Chart VI — Chemistry program

⁴ Also from *Emphasis: Occupational Education in the Two-Year College*, op. cit.

A similar variety of course sequences could be worked out for other disciplines and programs. Note that the concept of different levels applies to courses in general education as well as to specialized courses and to background-theory courses. The practice of putting together the general-education core for *all programs* by merely selecting courses in the social sciences, humanities, and arts from the standard transfer offerings is all too common, and more often than not is an exercise in futility.

SUMMARY AND CONCLUSIONS

What does all this mean for the junior college teacher? It means, obviously, a great many things. Let me mention just a few as I move to the conclusion of these remarks:

1. Junior college teachers must be able to make their disciplinary fields meaningful to students at several levels of academic ability.
2. Junior college teachers must be willing and able to plan new courses and work as a team to provide interdisciplinary experiences for junior college students.
3. Junior college teachers should make all possible use of the new media to get students to learn on their own time outside the classroom.
4. Junior college teachers should beware of the hierarchical ranking of subjects and programs. Academically, data programming is as respectable for one student as history is for another student. Teaching so-called "tech math" is just as professional as teaching integral calculus! I would hope that often the same teacher might teach both.
5. Junior college teachers should be aware of the changing job opportunities in the United States and, through this awareness, encourage the general pursuit of middle-manpower careers.
6. Junior college teachers should be aware of the importance of guidance and counseling programs and do their best to participate in them and to support them.
7. Junior college teachers should participate in curriculum development, asking not, "How can I keep my discipline inviolate?" but rather, "How can my discipline be of service to students in many curriculums and at several levels?"

Junior college education is responding well to the need for comprehensive college programs. The operation of the open-door junior college takes us closer to universal higher education with each passing year. If, as many economists believe, investment in human resources is the best investment we can make, then the American people, through the junior college movement, will receive the greatest possible return on their investment in higher education. Let it be clear, however, that universal higher education holds dangers as well as promises for society. How it will turn out depends on the kinds of collegiate programs we offer. If we design higher education to produce chiefly critics of society, and if we neglect to educate and train potential builders of society, we shall betray the trust which the American people have put in us. Make no mistake — higher education, including the junior college, is on trial in America; the next decade will tell whether we have served well as trustees for the American people or have merely been instruments for the fashioning of discontent, nihilism, and revolution.

CHART I

COMMUNITY COLLEGE ASSOCIATE DEGREE OCCUPATIONAL EDUCATION PROGRAMS

SUGGESTED CORE CURRICULUM PLAN

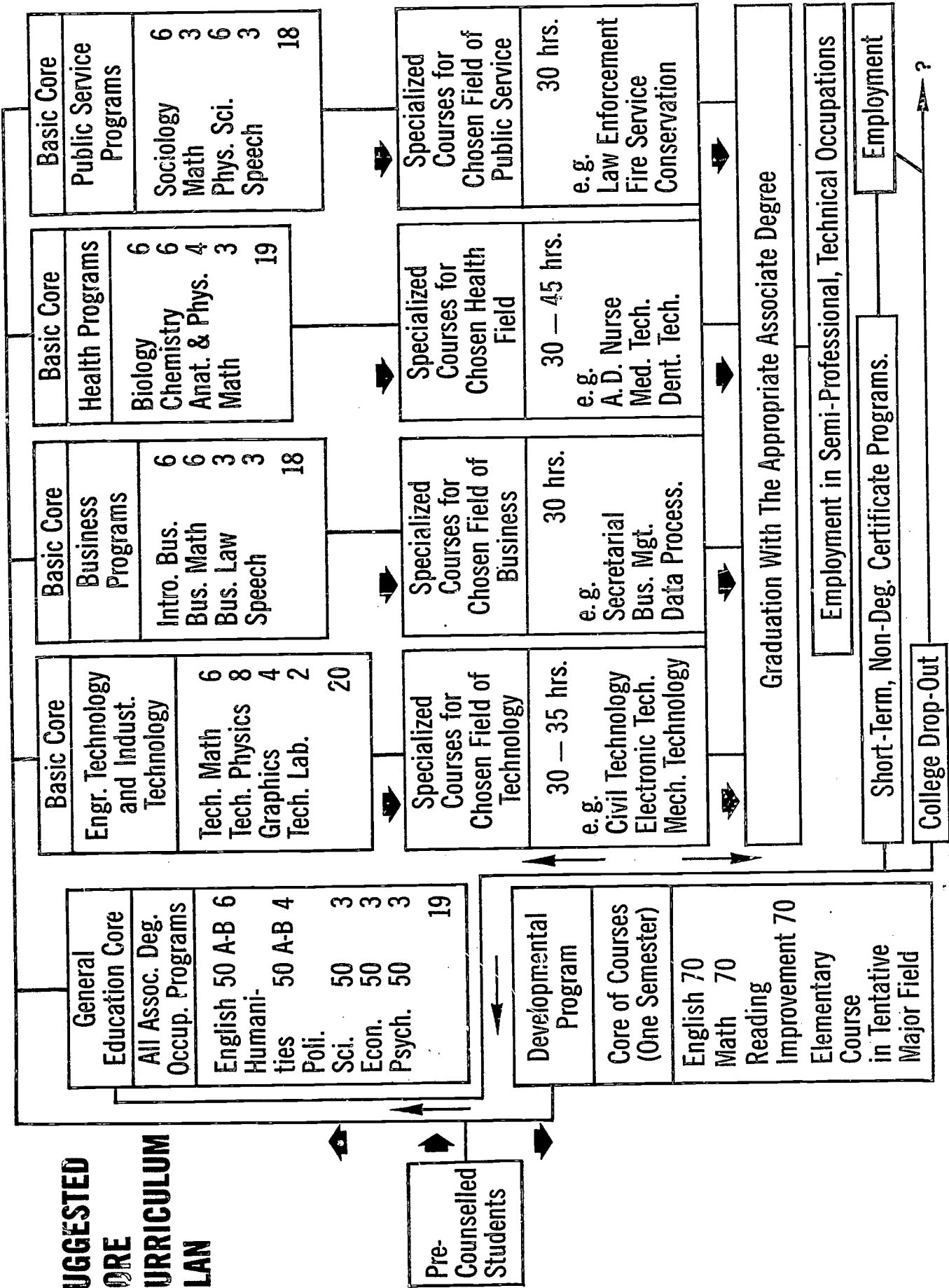


CHART II

FLOW CHART

SUGGESTED GUIDANCE PROGRAM
COMPREHENSIVE COMMUNITY COLLEGE

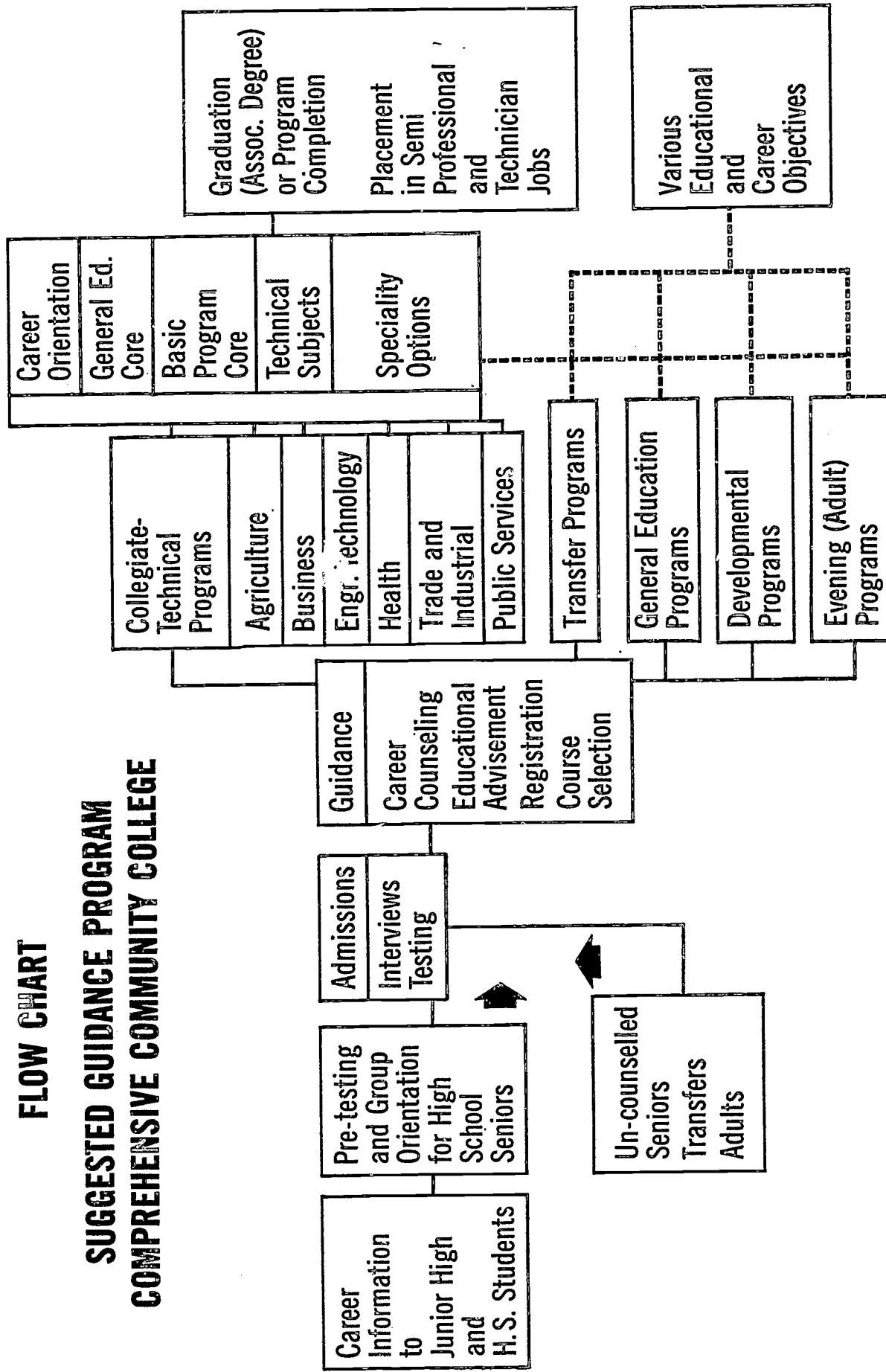
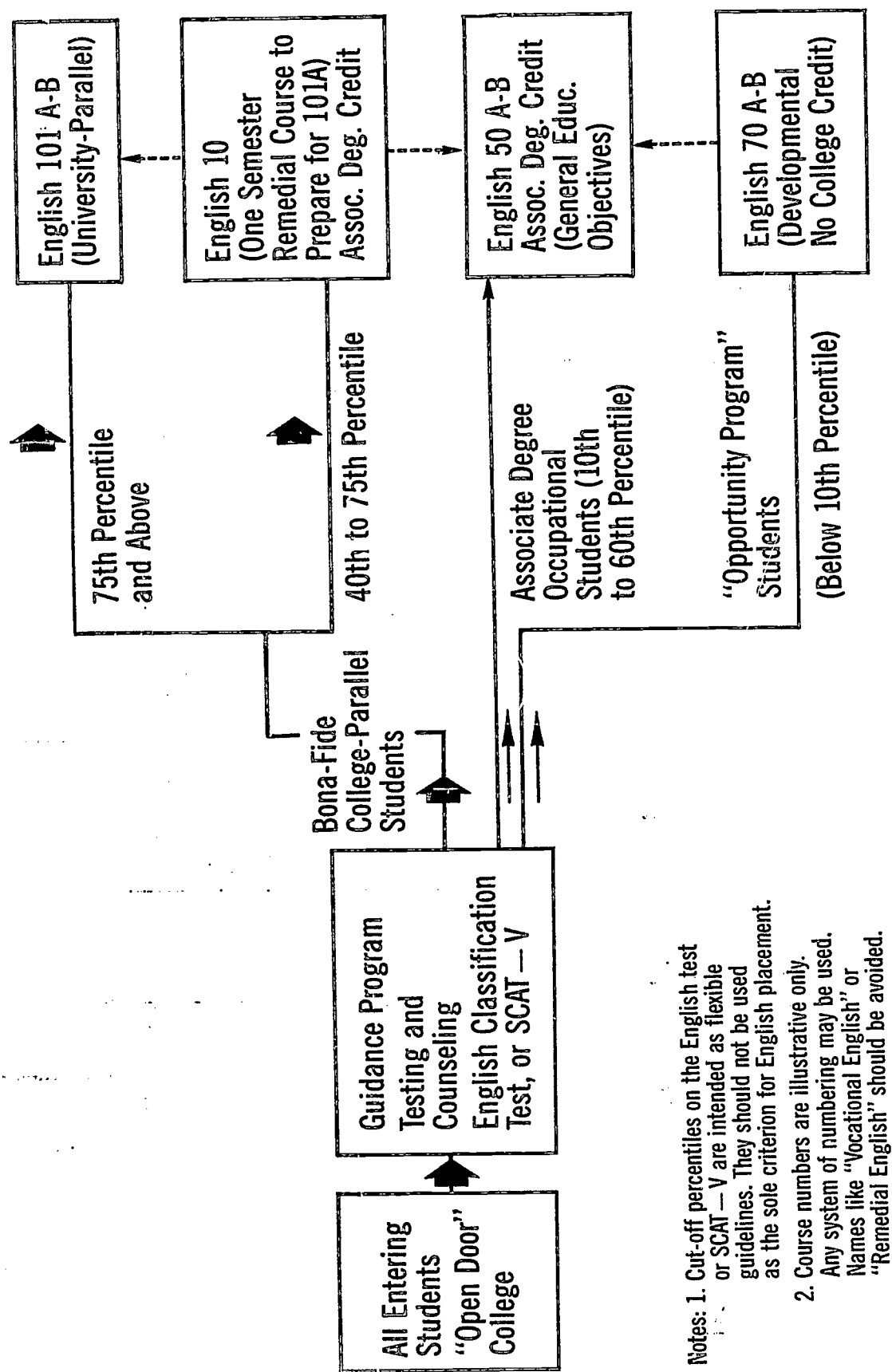


CHART III **ENGLISH INSTRUCTION PROGRAM** **SUGGESTED PLAN FOR COMMUNITY COLLEGE**



Notes: 1. Cut-off percentiles on the English test or SCAT - V are intended as flexible guidelines. They should not be used as the sole criterion for English placement.

2. Course numbers are illustrative only. Any system of numbering may be used. Names like "Vocational English" or "Remedial English" should be avoided.

CHART IV

SUGGESTED MATHEMATICS PROGRAM COMPREHENSIVE COMMUNITY COLLEGE

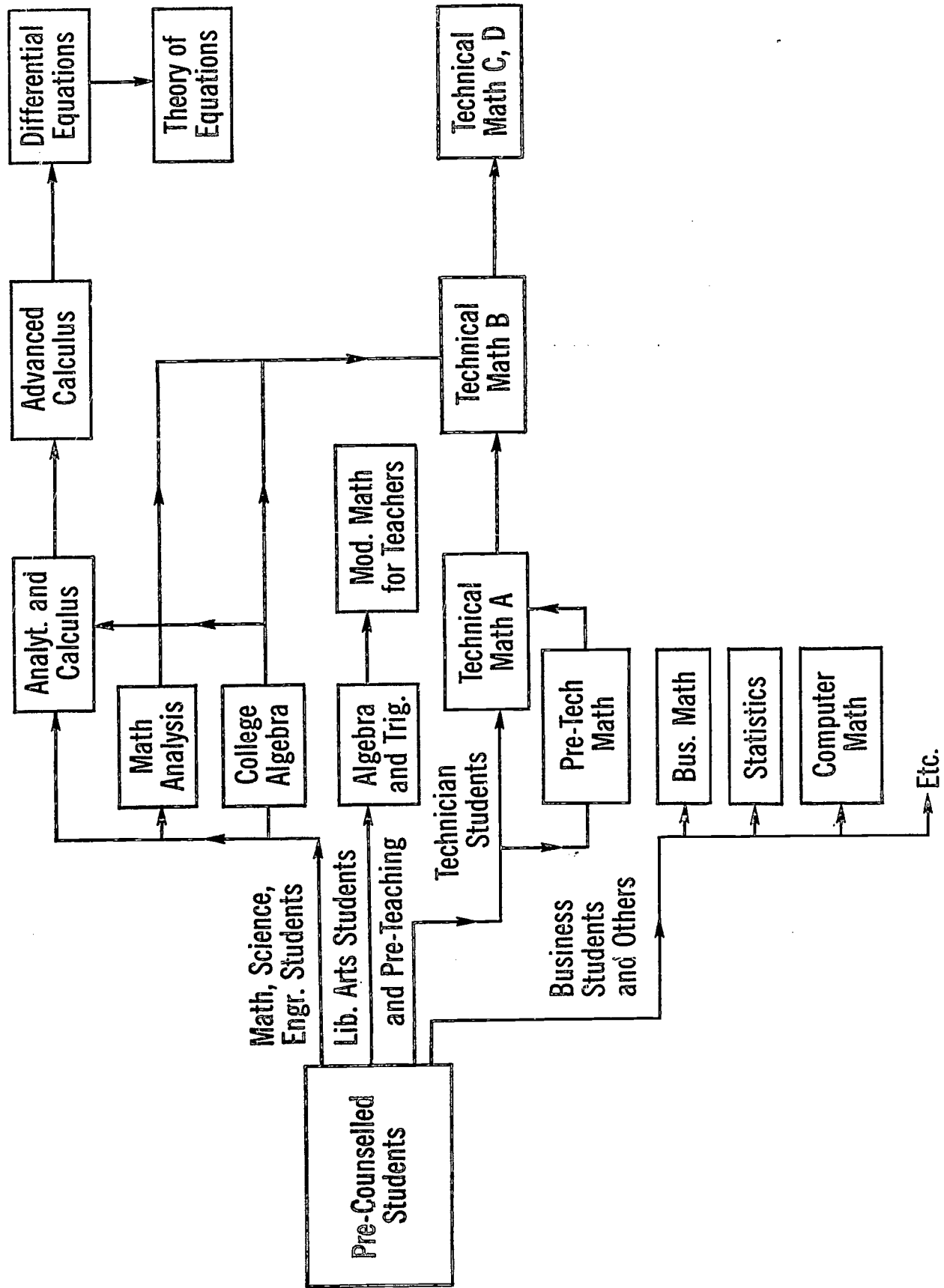


CHART V
SUGGESTED PHYSICS PROGRAM
COMPREHENSIVE COMMUNITY COLLEGE

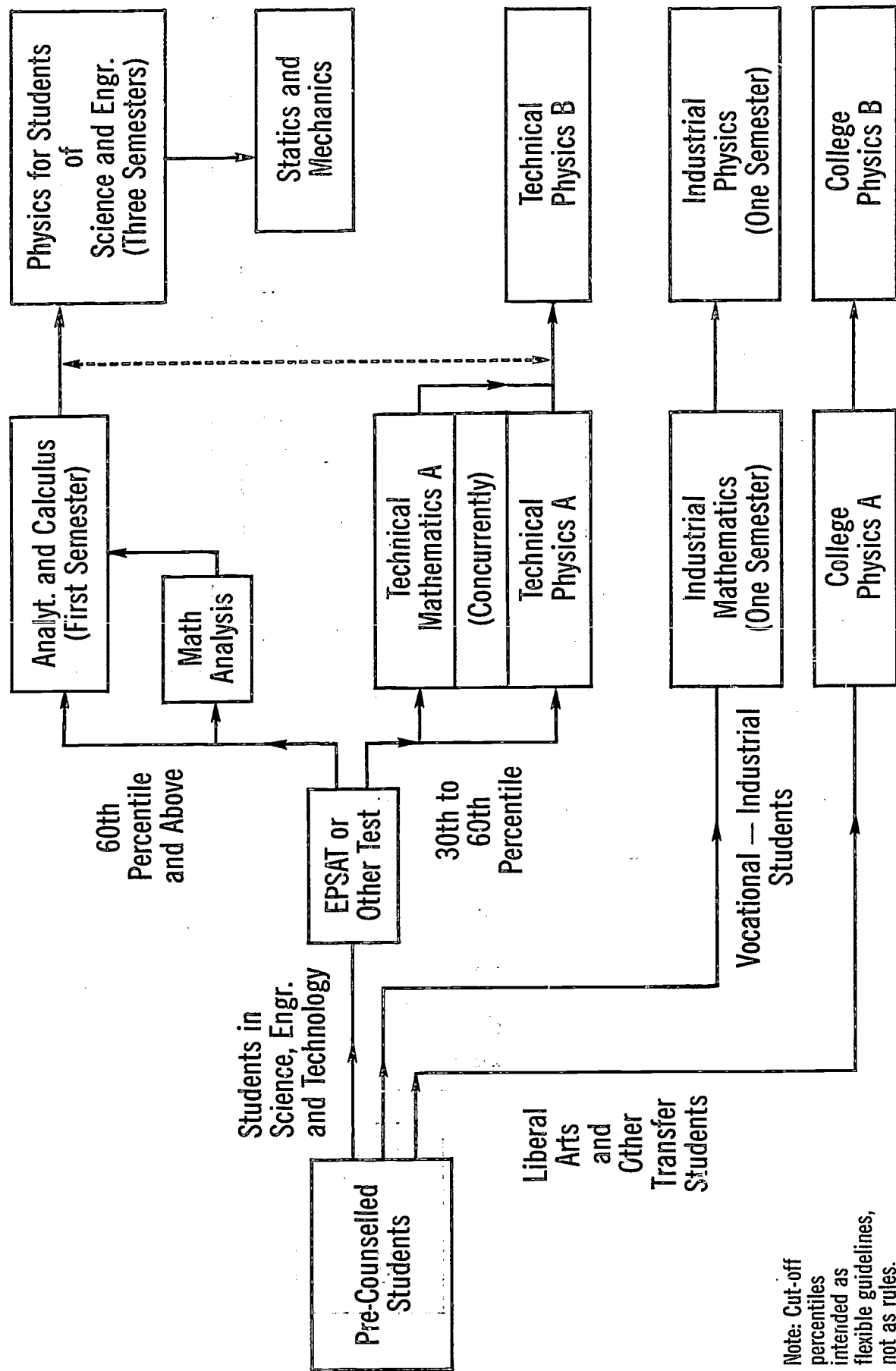
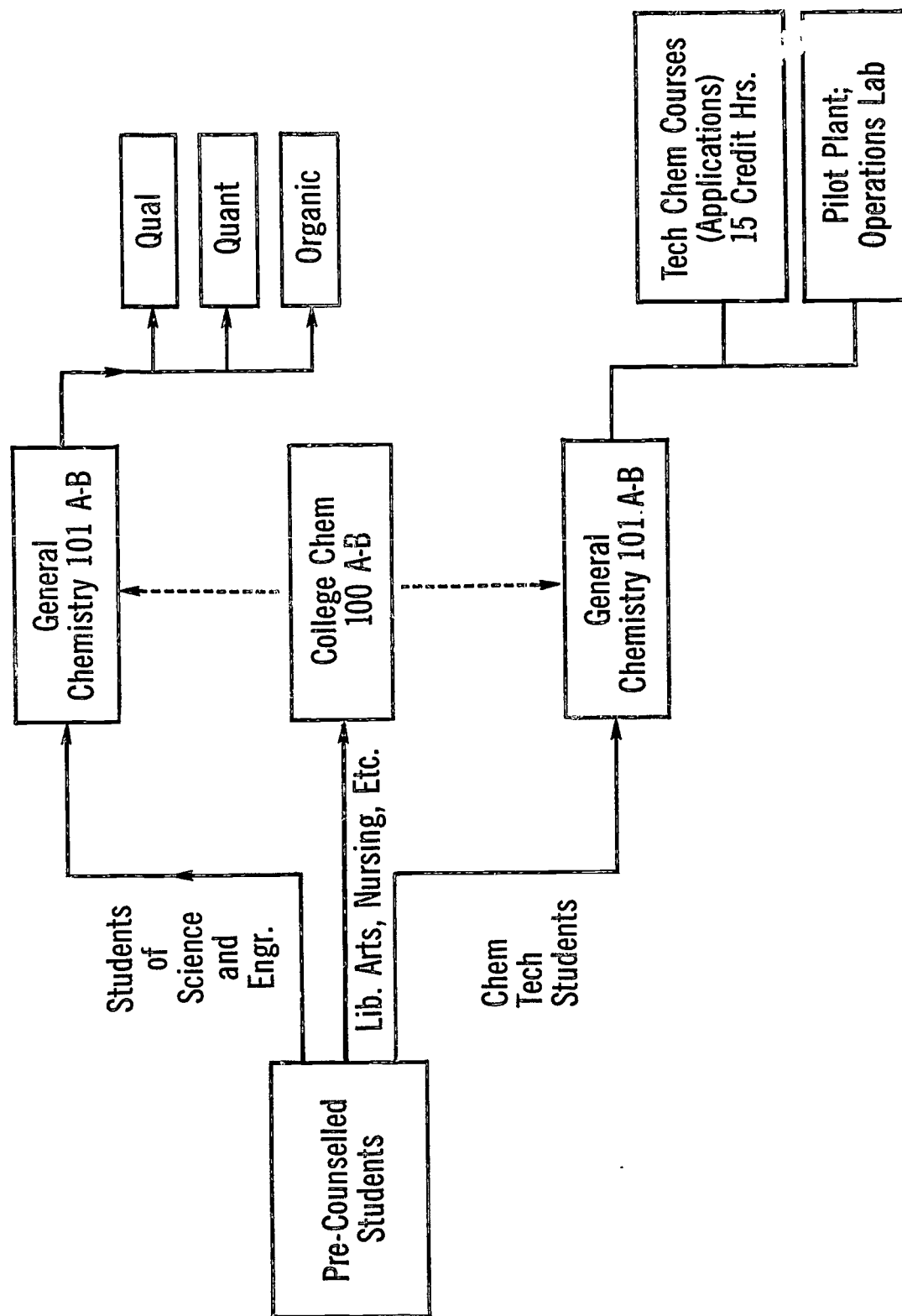


CHART VI
SUGGESTED CHEMISTRY PROGRAM
COMPREHENSIVE COMMUNITY COLLEGE



FACULTY PERSPECTIVES:

REPORT OF DISCUSSION GROUP

Charles Tschetter, Metropolitan State Junior College, Group Leader

Hugh Yamamoto, Metropolitan State Junior College, Recorder

Vocational-Technical Training in the Junior Colleges

The group endorsed the proposition of policy that all state junior colleges should be as comprehensive as it is possible for them to be within their specific regions and their means. The group recognized, however, that the coexistence of junior colleges and vocational schools in the same area posed problems that would have to be solved. Some of the problems cited concerned

- (a) the administration of both types of schools,
- (b) the duplication of services and facilities,
- (c) the competition for students,
- (d) federal funding, and
- (e) tuition.

The group agreed that, in planning curriculums, junior colleges should

- (a) try to insure public acceptance of graduates,
- (b) consult with prospective employers,
- (c) maintain sensitivity to the job market,
- (d) revise and update courses, and
- (e) retrain instructors when necessary.

The group noted that, since technical programs may vary in rigor, they entail several problems for students and teachers:

- (a) Technical programs involving mathematics and natural sciences require cognitive ability that some students lack.
- (b) Typical junior college students require that an instructor consciously differentiate between low ability and lack of motivation.
- (c) If remediation is a responsibility of junior colleges, how much of it should be done?

Junior College Center

What have other junior college centers done for junior colleges? This was the immediate question posed by the group. One member indicated that he had attended a summer institute at Moorhead State College conducted by the Center at the University of Michigan. What he had learned at the institute had been of great interest and benefit to him.

The group agreed that on the whole there was a need for further definition and clarification of the role to be played by the junior colleges in higher education. It was with this need in mind that the group endorsed the proposal to establish a junior college center in Minnesota. Such a center could

- (a) retrain teachers without subjecting them to an excessive number of so-called "education courses";
- (b) provide information about recent innovations in and approaches to teaching;
- (c) train prospective junior college instructors with a view to in-service training; and
- (d) provide services for students in such areas as advanced summer study, convocations, and placement.

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Participants

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REPORT OF DISCUSSION GROUP

Donald Penn, Hibbing State Junior College, Group Leader
Frank Ongaro, Hibbing State Junior College, Recorder

The group first discussed Professor Harris' address, which set guidelines for building an educational system suitable for all students who enter a junior college. In view of the growing need for technically trained persons in the modern world, the group felt that occupational education was a very important task of junior colleges. At the same time the group felt that these institutions should also provide a college-parallel program for pre-transfer students and a general-education program for other students.

The group then discussed some of the means of realizing such comprehensive junior college education. The topics discussed in this connection were cooperation between the vocational school and the junior college, the need for more counseling, an appraisal of classroom procedures, and a general restructuring of the junior college system.

The members of the group indicated that at present the junior college duplicates much of the instruction in the vocational school and that the two institutions should cooperate to make their respective programs more flexible and comprehensive. Such cooperation might, for example, make it possible for a student to do at both institutions course work that would be accepted by either institution. The sharing of equipment, faculty members, and facilities would strengthen both institutions and benefit them financially. To this end these now separate institutions might be placed under one new governing board.

With regard to the need for more counseling, the group agreed that career counseling should begin as early as the junior-high-school phase of a student's education. The group recognized the existence of educational counseling in junior and senior high schools, but felt that this counseling should be more career-directed. It also felt that a smaller ratio of students to counselors is needed in the junior college to achieve the goals of pre-counseling as well as general counseling during the school year.

In appraising classroom procedures, the group found the time-honored lecture system being used to a greater extent than some of the new approaches which involve the simultaneous use of several media. A change in procedures would, in the opinion of the group, require the acquisition of much more audio-visual equipment, laboratory equipment, and additional space. In the Minnesota Junior College system a different method of obtaining funds than that provided by the present full-time-equivalent (FTE) ratio would be necessary. The simultaneous use of several media may help the slow learner, the technically trained individual, the student preparing to transfer, and others in the junior college.

Professor Harris' talk centered on the large community college as an institution able to implement the training of a great variety of students. The group felt that, in order to fulfill the needs of these students, a greater diversity of program offerings than that found in smaller colleges will be necessary. Each subject should be offered at different levels in order to make it appealing to students of different abilities. It is doubtful that many of our smaller junior colleges will ever be able to achieve such a diversity without revamping their present method of obtaining funds. In the Minnesota Junior College system, even the large schools find it difficult to attain the needed range of programs because of the present method of obtaining operating funds. The Minnesota State Junior College system stresses quantity of students in the classroom, rather than quality of education. The group felt that the desirable pupil-to-faculty ratio would be fifteen to one (15:1) or less. Such a ratio would benefit the students by making available to them a wide range of courses and smaller classes (providing a better teacher-to-student relationship). At present several desirable courses are not offered because of the necessity of attaining the present full-time-equivalent ratio.

The group agreed that the proposed Junior College Center might help to overcome some of these difficulties. The group considered the possible services, the control, and the limitations of such a center.

The Junior College Center might provide, among other services,

1. Computers.
2. Mobile materials.
3. A Wide-Area Telephone Service (WATS) line to connect all colleges with each other, and each college to the center, and the center to the different central offices of the system. Such a line would make possible tele-lectures and facilitate communication.
4. Tele-writer service.
5. A research library for faculty and students.
6. In-service training, on a voluntary basis, of faculty members.
7. Rooms for seminars and conferences, such as meetings of faculty associations, subject-matter meetings, and similar functions.
8. Dissemination of information about what the four-year schools are doing and planning to do.
9. Counseling for faculty and students, including the students who have transferred to a senior college.

In addition, the center might facilitate the interinstitutional use of faculty, and might cooperate with industries in training the students for employment and in improving relations between junior colleges and industry.

The center should be controlled by the faculty members of the junior colleges. It should be student-oriented and service-directed. It should be neither a certification institution nor another graduate institution. It should not determine policy. Its location should be considered carefully: if it were established on the University campus, it might appear to some to be University-directed; if, however, it were established very far from the University, it might lose some of its effectiveness.

The members of the group suggest that a steering committee representing the faculty of all junior colleges should be formed to study the design of such a center. The committee should obtain information from junior college centers already in existence and from other sources.

Participants

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REPORT OF DISCUSSION GROUP

John K. Hinsverk, Anoka-Ramsey State Junior College, Group Leader
Ronald Hunter, Anoka-Ramsey State Junior College, Recorder

Listed below are the topics and issues discussed by the group.

- I. The procedure of granting credit for courses by examination was discussed. The consensus was that any student should be allowed to take examinations for the purpose of earning credits for transfer-level courses and certain courses in vocational skills. The determination of the grade and examination procedure should rest with the instructor.
- II. The problem of the small colleges in offering multiple-level programs suited to the wide range of students' abilities was also discussed. It was apparent that there is a need for more programs for the slower student. The need for experimentation with, and innovation in, teaching techniques was strongly emphasized. The school should work closely with business and industry in developing these programs. In view of the open-door policy of the junior college, we cannot hope to provide something for all students by means of a traditional curriculum.
- III. The difficulty of counseling junior college students was discussed, and the general feeling was that an adequate job was not being done at the present time. Realizing that counselors cannot be experts in all fields and are overburdened with detail work, the group felt that there should be more teacher involvement in helping students who have specific areas of interest. There should be closer coordination between counselors and teachers in advising students before problems arise. Another problem in counseling students has to do with the fact that, to be transferable, the junior college programs must fit the designs of senior institutions.
- IV. Junior colleges should cultivate public relations by informing the community of student accomplishments — not only in sports but in other areas of endeavor as well. An excellent way of publicizing student accomplishment would be to award freshman, sophomore, and transfer scholarships. Many business organizations would be willing to contribute to the establishment of such scholarships. The award of the scholarships should be made, if possible, in cooperation with higher institutions.
- V. The problem of relations between the junior college and the vocational-technical school was also discussed. The general feeling was that one institution would be preferable to separate institutions, but that closer relations should be sought if students are to

benefit from both institutions. It would be desirable for the two institutions to exchange students and to grant joint credit for certain kinds of course work performed at either one. The problem of tuition is an administrative one which could be resolved without hardship to the two institutions or their students.

- VI. One of the problems of the junior college is the high attrition rate in the two-year programs. Some of the reasons for this rate may be teaching methods, lack of desired courses, and the excessively high load of many teachers which makes it next to impossible for them to do a good job. Students should be given the opportunity for more participation and creative work which would stimulate their interest in the subjects.
- VII. Programmed learning was discussed, and the following ideas were presented: Programmed learning may be one way to offer additional tracks in some areas. It should be used not as the sole teaching method but as an adjunct to other teaching methods. The student must assume greater responsibility with programmed learning, and therefore the slow student needs more supervision in its use. We discovered that there is a Center for Programmed Learning at the University, headed by Dr. Russell Burris, in Room 401, Ford Hall.
- VIII. The establishment of a junior college center was discussed, and the reactions were as follows: Faculty members do not want such a center to become an arm of the University or of the state colleges. It should not be strictly a training center for junior college teachers. It should be a clearing house for new ideas, the exchange of ideas, and information for junior college teachers. It could help bridge the gap between junior colleges and higher institutions in establishing standards for transfer and scholarships. It could assist in school planning and construction and in long-range planning in various areas. It might also be advisable for the center to serve the vocational-technical schools. The staff of the center should include representatives of the junior college faculty. The center should not be a policy-making institution.
- IX. The role of junior college faculty was also discussed, and the following conclusions were agreed upon: The faculty should be consulted in the hiring of new staff members. The source of new faculty members was not clearly identified, but they might be recruited from high schools, other junior colleges, or four-year institutions. Schedules and routine assignments should be kept flexible in order to attract specialists to our faculties. Part-time faculty might be used in areas that require specialists, but the majority of the faculty should be full-time teachers at the junior college.

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REPORT OF DISCUSSION GROUP

J. Merle Harris, General College, Group Leader

Douglas M. Dearden, General College, Recorder

This report lists each general topic discussed by the group, and summarizes under each heading the tenor of the discussion with special emphasis on recommendations.

I. The Junior College Center

A. Functions of the Center

This center should be a service organization for the junior colleges and should be regional rather than statewide in scope. We recommend that such a center be instituted as soon as possible, and that it might be modeled after a similar center located at the University of Michigan.

This center, if organized properly, could be of tremendous value to junior college faculty and administration. It could offer in-service training, summer institutes, and workshops. It could grant faculty members stipends which would enable them to take a leave of absence from teaching and to study at a four-year institution. It could provide internships for new staff members in counseling, teaching, and administration.

We would like to see this center develop such things as a closed-circuit television system which could beam special classroom presentations to the various junior colleges. In addition, laboratories at the junior colleges and graduate programs for junior college faculty members could be developed under the guidance of the center. It could also disseminate publications and films. We would want the center to be personnel-oriented rather than equipment-oriented, but we would want some special equipment developed, as noted.

The Junior College Center should be a research center for the junior colleges. Various aspects of research, unique to the two-year institution, could be advanced by this center in cooperation with the personnel at the junior colleges. One suggested research project would be to develop a complete profile of the students who attend junior colleges and also to follow up these students after they leave our institutions.

B. Organization of the Junior College Center

The center should be under the leadership of one full-time director, who would be paid jointly by the junior colleges and the University of Minnesota. To assist and to supervise the director, a board of directors should be formed. The board should consist largely of representatives of the two-year institutions, but it should include resource people from other areas. The center should be very closely affiliated with the University of Minnesota, and the General College should provide some kind of liaison between the University and the center. People from other units of the University, such as the Graduate School and the College of Education, could supplement, but not replace, the General College in this function. The center should act as an intermediary between the two-year institutions and the Graduate School in developing a new kind of graduate training for junior college personnel.

C. Location of the Junior College Center

Two points of view were expressed about the location of the center. Some people felt that it should be on or near the University campus. Others felt that it should be located at or near one of the junior colleges in the area of the Twin Cities.

D. Funding of the Junior College Center

The funds would come from three sources: foundations (such as Kellogg), the Minnesota State Legislature, and the Federal Government. Since the center would serve a region rather than a state, the Federal Government might be persuaded to support it.

II. The Relationship of the Junior College to the Technical-Vocational School

The junior college and the technical-vocational school should not be separate institutions, as they have tended to be. Their integration may have to be effected by the State Legislature. The school districts will probably be very reluctant to relinquish the federal funds which they receive for the technical-vocational schools.

III. Problems Within the Two-Year Institutions

A. Counseling

The group questioned the present effectiveness of pre-counseling, which fails to meet the standards stipulated by Dr. Harris in his speech at the beginning of this conference. If the student is to be thoroughly counseled before entering junior college and pursuing a prescribed curriculum, the counseling will have to be done primarily in the high school. We need to improve our relationship with the high-school counselors to make such pre-counseling effectual. We also need closer coordination between the junior college faculty and counselors.

B. Program

The junior colleges should do more to fit their programs to the needs of their students. We need the transfer programs set up at our institutions, but they seem to command greater attention than the programs set up for the middle-ability students. We should do more for the latter, and work toward developing a curriculum for them that is not just a weakened version of the transfer program.

There are inherent difficulties with the track system in some of our institutions. The cost of instituting a multitrack system may be exorbitant, especially at the smaller colleges. The student who transfers from one track to another also runs the risk of losing credits and entering sequence courses at the wrong time. Perhaps an alternative to the track system would be what we might call "the departmental system." Under this system each department would determine the ability of a student in its field of study and enroll him in a class commensurate with his ability. A student, for example, might be found to have low ability for mathematics but high ability for English. He would then be enrolled in a remedial mathematics course and in an advanced English course at the same time.

C. Textbooks

It is difficult to obtain texts designed for junior colleges. We need to develop our own texts so that teachers do not have to adopt second-choice, so-called "standard," texts.

D. Ordering Supplies and Laboratory Materials

In a junior college a faculty member may have to order his supplies and laboratory materials three to twelve months ahead of time. Often supplies and laboratory materials arrive late and turn out to be improper substitutions. Live biological specimens run the risk of dying during long shipment. There are also problems in ordering films for classroom use.

E. Travel Money

There was unanimous dissatisfaction with the small amounts of travel-expense money given to junior college faculty members. The group proposed that a larger amount of travel-expense money be allotted to each college and each faculty member. The group also proposed that the junior college administration establish institutes for junior college faculty members and reimburse them for their expenses in attending these institutes.

F. Future Junior College Conferences

The members of the group were unanimous in expressing their appreciation for this conference. They found the sessions very rewarding and expressed their hope that there would be additional conferences. They suggested that the responsibility of organizing such conferences could be assumed by the Junior College Center which they hoped would be established as soon as possible.

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REPORT OF DISCUSSION GROUP

Donald Olsen, Rochester State Junior College, Group Leader
Roger Borowick, Rochester State Junior College, Recorder

New Curricula

The problems inherent in developing a comprehensive junior college were discussed at some length. Many members of the group felt that in Minnesota we have attempted to initiate new programs too rapidly, and that we should do a better job of planning and financing such programs.

We realize that the role of the community college is to serve the community. However, this should not be accomplished at the expense of existing programs. The state should reevaluate its procedure of allotting funds for supply and equipment, and allot larger funds to colleges with expensive technical and occupational programs.

Developmental Programs

These programs were also discussed in some detail, and several interesting points were raised. Certain members were astonished to learn that in some colleges a student can earn the A.A. degree by taking courses almost all of which are developmental. Does this cheapen the A.A. degree? Should such a student be given some other degree? Should developmental courses carry college credit? Perhaps they should be used merely for purposes of remediation, and if the student has been remedied he should be moved into a transfer or occupational track. No definite proposals were made, but many questions were raised.

Junior College Dropouts

The consensus of the group was that the junior college is not doing all it could for the low-ability student. What happens to the large number of students who do not graduate from any program at the college? Could we as junior college teachers be doing more for this group? A study to answer this question seems warranted.

The problem of counseling was repeatedly considered. Many of our students would like to earn B.A. degrees even though they appear incapable of doing so. It is often difficult for counselors to guide these students into a vocational or technical program, and in many of our colleges such a program is not even available.

Two suggestions were made:

1. Greater use should be made of faculty counselors. Students tend to identify with certain faculty members, and this rapport could be used to advantage in counseling.
2. All colleges should be allowed to develop occupational and technical programs so that counselors can guide students into the programs that best suit their abilities.

A college, unless it has a wide variety of offerings, cannot hope to fulfill the role of the community college.

Building Programs

In view of the current building programs, we felt that some discussion of the problems related to the establishment of new facilities would be helpful. Many faculty members, having been consulted about the establishment of such facilities, have made a great many suggestions, but their suggestions have generally not been followed. Several examples of inadequate facilities were cited.

Junior College Center

It was interesting to notice the variety of reactions to the proposed establishment of a junior college center. Some members of the group expressed their fear that the center might be dominated by the University of Minnesota. The consensus was that the State Junior College system could definitely use the assistance of such a center. Some of its suggested functions were (1) coordination of curricular problems; (2) establishment of portable laboratories (major pieces of equipment that no single college could afford to purchase); (3) arrangement of graduate work that might be offered via television for junior college instructors; (4) aid in establishing professional contacts between junior college and University instructors; (5) coordination of transfer procedures; (6) coordination of convocation programs; and (7) coordination of student workshops and activities.

Whatever form the Junior College Center might take, our group felt that it should be administered by faculty representatives of the junior colleges, the state colleges, and the University.

Computers

At present the State Junior College system does not have a computer available for student use. Several members of the group felt that a computer for such use must be provided soon if the junior colleges are to maintain high-quality educational programs. Computers are becoming so prevalent that any student of science should have some exposure to them.

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Lowell Fitzgerald, Rochester State Junior College, Business/Occupation
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John Gustafson, Worthington State Junior College, Biology
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Leroy Johnson, Mesabi State Junior College, Chemistry
Paul Lienau, Willmar State Junior College, Physics
William Lundquist, Golden Valley Lutheran College, Physics
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SECTION 3

RESPONSE TO THE REPORTS

Donald K. Smith, Associate Vice President, Academic Administration, University of Minnesota

I enjoyed the reports, and I thought they were lucid. As Merrill Rassweiler said, by the time we add up all the possible functions for a junior college center we have an agency which has almost unlimited scope, and I suppose at some point reality will begin to set some order of priorities, assuming that an institution of this sort can be founded. I heard a story last week about a Texas development corporation whose president called in its business manager and said, "I have learned that the Schenectady Instrument Company is on the market. I want you to jump on a plane, get east right away, and buy it up. But don't offer more than \$28,000,000 for it." So his business manager took off, telephoned back in the evening and said, "I have some good news and bad news for you." The president said, "Yes . . . ?" — "Well," said the business manager, "the good news is that they are willing to sell for \$25,000,000." The president said, "That's good." — "Now," said the business manager, "the bad news is that they want \$5,000 cash." I suspect there is a point at which we will be faced with the problem of how much cash can we put on the line for a junior college center and how many functions can be effectively absorbed by this kind of institution.

I am very much interested in the proposition for the development of the center, not only because of its research function — which seems to me to have merit — but also because of its potentiality for carrying forward the work of instructional development. I was interested in the concern about University domination. I don't know quite how to respond to that. My own experience is that the University as a whole can't dominate anything, including itself. Various functions of the University tend to be controlled by the people who take part in developing these functions and in performing them. I do think that, if we are talking about a significant research and development enterprise, both the enterprise and the University would be losers if the University didn't participate. I also think that the purposes and operations of this enterprise would follow from the decisions established for its governance. The establishment of an appropriate faculty council to be responsible for the center's policies and programs would assure optimal control for all the people who would work with, or draw upon the work of, the center. The great danger I see in higher education, as well as in education generally, doesn't relate to the question of who dominates whom; it relates to the problem of bureaucratization and isolation. I think we are already experiencing the enormous problem of the isolation of one group of people in the profession from other groups of people in the profession. I think there is danger that this isolation will get worse before it gets better. I am intensely interested in the development of institutions that pull people out of their intellectual and institutional isolation and put them into a relationship with people working in other intellectual contexts and other kinds of institutions.

To illustrate my point about the danger of isolation, let me refer to a conference I attended last night. It was one of a series of conferences called "The University Seminar" and devoted to bemoaning the shortcomings of the University, especially of its administrators; so I go to these meetings for therapy. Now one idea that nearly always creeps out when the University faculty members get together is the idea that all of our problems at the University would be solved if we were to do only graduate instruction and research. These,

after all, are the things we do best. And incidentally, although I don't think it happens to be incidental, they are also the things we find it most comfortable to do. So the argument runs that if only we shucked off all of our investment in undergraduate education, then everything would be rosy. Well, I don't think it would be rosy at all. The idea is, of course, politically ridiculous. But more importantly, the idea is, educationally, fundamentally unsound. University education has to maintain its present scope or else it becomes intolerably bureaucratic and intolerably removed from the reality of students' lives. For this reason I am bitterly opposed to tendencies that separate people whose primary roles may be in research and graduate instruction from contact with and involvement in undergraduate instruction. And to carry it further, I am equally opposed to people at the collegiate level getting isolated from education from Kindergarten through the twelfth grade. I think that the re-engagement of all persons in higher education with the schools is an urgent necessity in our society, one which will require the formation of new habits and in some instances the formation of new institutions and new interinstitutional relationships.

We developed this ridiculous isolation of institutions of higher education from the schools a good many years ago. In the nineteenth century we said in effect that the liberal arts colleges were not sufficiently flexible or adaptable to train and to prepare persons for teaching in the elementary and secondary schools. So we invented new organizations which would have flexibility, and we called them "teachers' colleges" or "colleges of education," and they were supposed to train and to prepare persons for the profession of educating children. With our unique American ingenuity we then succeeded in bureaucratizing these new institutions, and many of them got themselves into the unenviable position of being isolated not only from the liberal arts colleges but from the schools as well.

At the present time there is much agitation in American education to take many of the functions of teacher education back into the school districts on the grounds that the school district can be sufficiently flexible and innovative to circumvent the rigidities of colleges of education, not to mention the rigidities of liberal arts colleges, not to mention the insuperable rigidities of graduate schools, and so on. The whole story turns into an endless by-passing of the real problem, or at least so it seems to me.

The real problem is that of keeping all of us who have anything to do with the educational process engaged with each other — so that we are aware of each other's problems and are able to help each other in solving as many of these problems as possible. I am not saying we will ever see the day when persons and divisions in each educational institution won't be isolated from persons and divisions in other institutions. But we need to create agencies and settings where we come together. I see the partial fulfillment of this need in the creation of a junior college center. We could create an agency which would not just replicate those centers already developed in this country, but which could draw University and junior-college people together to study their common problems of strengthening the education of Minnesota citizens.

When I hear members of your group talk about the functions of a center, I am always torn between the desire for inclusiveness and the practical — even meritorious — demand for well-defined limits. I heard some of this same conflict in the group reports today. Some groups believed it best that such a center limit itself rather sharply to the two-year college, and there was concern on the one fringe as to whether or not a center ought to get involved with vocational education, and on the other fringe as to whether or not it ought to get involved with four-year and graduate institutions. My own impulse tends to favor the emergence, or at least to forecast the emergence, of an institution which sets up as many linkages to various aspects of the educational process as possible. I recognize, however, the real merit in founding a new institution devoted chiefly to the research and development needs of a particular educational system that is growing more rapidly, I think, than any other system in our state or nation — namely, the junior college.

I am going to move along quickly to discuss the concept of educational development. I am convinced that the most significant new frontier in American education is that of making educational or instructional development the main feature of all our educational institutions — colleges, high schools, elementary schools, junior colleges, universities. The primary responsibility of these institutions for the systematic study of teaching and learning, and for the systematic development of the processes involved in teaching and learning, has come to be recognized. I think we have moved beyond the period of history in which the development of instructional systems could be considered to be a natural overflow from the teacher's life. The past, I believe, assumed that a teacher studied his discipline — studied the content of learning, however vaguely defined — and then went out and started teaching. The past assumed further that he got better and better at his job. Because he had been given a light teaching load and a gentlemanly life (we all realize how relaxed it is — the life of a teacher) he had time to read and reflect. Thus he continually perfected the integrity of the materials he was bringing before his students, updated those materials — brought them in tune with the best that was currently being spoken and written — and grew more and more skillful as a teacher. This past also perceived the changes in the materials, methods, and structure of the curriculum as relatively serene natural events. No one believed that these things would not change, but everybody believed that they would change slowly rather than abruptly — over generations rather than within the life of one teacher, so that it was possible for him to keep up with his field in a rather comfortable way and not to be made obsolete by a sudden sunburst of new knowledge.

I don't think these assumptions about the life of a teacher and about the development of the teaching and learning process can any longer be held. I don't think the assumptions are warranted: I don't think they are tenable. For the last twenty years we have been talking about and anticipating rapid and creative changes in the instructional process and in the organization of instruction. But we have talked about changes rather than effected them. I was interested in Professor Harris's comment that as you travel around you find people teaching pretty much the same way they taught 35 or 40 years ago, and indeed I don't even have to travel around to make this observation. I just go and teach a class, and for all my brave talk about innovation I hold forth pretty much the way I did back in 1936. There has been a great discrepancy between our anticipation of changes and our actual realization of them.

Yet the forces for change have been gathering. Now why can't we live with past assumptions? I want to discuss three reasons very briefly, and I am sure these are reasons that have occurred to you or have been part of your experience. One reason is that those of us who teach today must make collaborative efforts to increase the efficiency of the methods by which we relate our subject matter to students. We often are not in a position to bring about certain kinds of changes in our course systems, let alone our whole curriculum, by individual enterprise or personal entrepreneurship. I can give you an obvious example of this, and it's a good example, I think. It's often the case, I believe, in the development of a particular course system that this system could profit from the right kind of filmed material. The filmed materials may be available as a result of the kind of technological support that has developed in education, and perhaps we can discover or find precisely the films we need. Perhaps, however, we can't, and the films we need are films we must make. At this point the need for collaborative effort is clear. So is the need for capital investment in educational development.

I have used this example before because it seems to me an excellent illustration of my point. The Minnemath Center at the University, an NSF-supported center concerned chiefly with elementary-school math and science programs, has been in business for ten years. At one point in its history it also received a grant to develop a film series for a college algebra course. Now I have looked at some of those films that have been produced by Professor Schuster, Professor Downs, and others, and there were two things that struck me about the films

that have been produced. One was the sheer excellence of the films; they are spectacular pieces of instructional art. The other thing that impressed me deeply was their great cost. They were tremendously expensive. And they were expensive because it was assumed in the development of such films that it was necessary to bring together not only several teachers but also the best mathematicians and the best available film artists. The use of such a team — the film maker, the producer, the graphics specialist, the mathematicians, the teachers, and so on — made the films costly, but it also made them memorable. The results point clearly to the fact that teachers are often no longer in a position to develop individually what they envision as a desirable instructional system. If we reach the point where we would like to convert some of our instructional procedures into an arrangement supported by audio-visual methods, we need both time and collaboration with others. If I am just sitting alone in my classroom with a vision in my mind, I can't turn that vision into practice. It is going to take an investment of time and imagination on my part. It is also going to require that I collaborate with other people who can not only help me in solving the various design problems and technical problems that may be involved, but also help me avoid trying to do myself what somebody has already done elsewhere. I get myself into the same position if I talk about programming parts of my courses. I get myself into the same position if I talk about computer-assisted instruction.

There is a second reason why we must abandon our past assumption that educational development can proceed as a natural overflow from the lives of classroom teachers. We have moved rapidly in this nation toward the concept that higher education, education beyond high school, is in some form a necessity for all our citizens. Given the breadth of the mission we have assumed, we are increasingly pressed to the wall by the fact that we must work with a plurality of student groups holding a plurality of objectives. We need much more diverse and flexible instructional systems than we have achieved in any of our existing institutions of higher learning. I was reminded of this Sunday evening when I looked at the elaborate design Professor Harris developed for managing various groups of students coming into a junior or community college. Yet, elaborate as his diagram was, I had an impulse to say that it was incomplete. For example, he didn't indicate the way in which education in the arts was to become part of the total system, and I think our institutions of higher education are responsible for engaging students in the arts. My point is that, complex as our educational institutions now seem, our instructional systems are still underdeveloped in view of the diversity of our tasks — in view of the many different students we have to work with, in view of the many different purposes we need to achieve in working with them. We aren't going to get the development needed to accomplish this diversification of our capability as an overflow from the lives of classroom teachers. Teachers will need time and support to direct their energies specifically at tasks of development.

A third reason exists for abandoning our old fashioned assumptions about development. Suppose that most of us teaching decided to stay with our past, with a vision of self and student balanced on a log, with a vision of a relatively stable curriculum changing slowly and serenely between generations. If we did this, I'm not certain our students would allow us to survive for much longer.

Students are obviously growing more obnoxious in the demands they pose. They are getting serious about this business of living in a culture in which they have been told that the realization of their own personal values is a task colleges are supposed to be concerned with. I read with some interest the most recent committee report from the University of California at Berkeley called *The Culture of the University: Governance and Education*. Berkeley does nothing if it does not produce large reports, and one of the statements by this committee, a most distinguished committee, is a very sharp criticism of the instructional or educational output of Berkeley. They put it this way: "The inertia of our institutions and our lack of a rooted tradition of educational innovation have had a paradoxical result. They have led to a brave and unwarranted complacency as though the campus truly believed its

official rhetoric that this is a great university, the peer of any institution of higher learning in the world. We are skeptical, however, that a count of Nobel prize winners, the high national rating of graduate departments, the presence of a distinguished faculty provide conclusive measures of the university's greatness. These attributes do not in themselves represent a university's ultimate goals but rather means toward achieving them. In our view the most important single goal of a university, and therefore the best measure of its excellence, is the intellectual growth of its students. Their initiation into the life of the mind, their commitment to the use of reason to the resolution of problems, their development of both technical competence and intellectual integrity."

I believe that the preceding statement applies not only to Berkeley but to any institution of higher education. Therefore, the statement implies what I want to say — that the central push in institutions of higher education in the next decade must be toward teaching and learning, toward really making good on the promises we have been putting out to our students about having something to offer that was going to make a significant difference in their lives.

I have now given three reasons why I believe we must move to a new concept of educational development in our institutions of higher learning: we must do so because teachers need time and collaborators for the effective development of educational systems; because the tasks of development we face are enormously complicated; and because our students, for whom education has been pictured as a solution to all personal and social problems, are demanding a more vital and productive educational experience. For me these reasons add up to the simple proposition that in the next decade those of us who profess must plan the arrangements and invent the institutions which will focus a significant part of our energy and talent on the work of development.

One of the institutions we should be inventing is an interinstitutional center for educational development. We need to create a place where teachers with common problems in our several institutions can come together, where they can work together on their common problems of teaching and learning, where they can find expert technical assistance to help them realize some of their instructional goals.

I see the need for this kind of institution as common to the University, the state colleges, and the junior colleges. I regard with great interest the possible development of a center where teachers might begin doing some of these things. And if such a center were established by virtue of the initiative and energy of the junior college faculties, I would welcome any opportunity for participation by University faculties.

I hope you have had a pleasant conference. As I understand it, I have at least three more steak dinners to look forward to if this sequence continues next year. I hope we will see many of you here again.

SECTION 4

MINNESOTA JUNIOR COLLEGE FACULTY:

Interests and Concerns

Norman W. Moen, Assistant Dean, General College, University of Minnesota, and Ramon L. Stave, Program Director, General Extension Division, University of Minnesota.

The recorder for one of the discussion groups at the first of these three junior college faculty conferences reported one participant as saying: "I came here cocksure and complacent, and ended up really worried." Delores A. Lakso of Mesabi State Junior College, another recorder at the first conference, wrote:

This conference gave us in the junior college of Minnesota the opportunity to take . . . a good look at ourselves, to see what we are doing and why we are doing it, to evaluate our junior college and our work in it. Such a process of self-analysis depends on questions, questions sharply directed and honestly answered. We asked ourselves such questions and probed for answers, and although we found that we did not have answers for most of the questions, and that when we did, we did not agree with the answers offered, we nonetheless had much to think about. We had our set opinions challenged, our cherished ideas evaluated, our prize procedures questioned — and we gained new insight

According to all reports, the discussions were spirited, comprehensive, upsetting, and enlightening. Problems were raised and prejudices aired; questions were asked and ideas shared.

The questing, questioning spirit of the discussions was characteristic of the project from the outset. As a result, both planning and conducting these conferences proved to be a means of identifying certain of the basic interests and concerns of Minnesota junior college faculty members.

For example, the advisory committee agreed from the beginning that the conference should focus upon topics selected by the participants themselves. It first attempted to discover these topics by means of the ubiquitous but unloved questionnaire, which, in this case, was designed to measure degrees of interest in various aspects of the curriculum, instruction, preparation of teachers, and professional faculty concerns.

The questionnaires were forwarded to all faculty members in all of the public and two of the private junior colleges. But the documents were long; junior college teachers were preoccupied with the business of starting the 1967-1968 academic year; the device lacked novelty; and returns only reached an approximate fifty per cent. Some 240 replies were received from eleven institutions. The results should be considered in the light of these figures.

The questionnaire results show that curriculum matters head the list of Minnesota junior college faculty interests. These teachers want an inventory of what is now being taught in their own subject-matter fields in sister junior colleges, including course descriptions, lists of texts, credits, and special materials used.¹ They request reports of innovations in Minnesota

¹ 157 of the 240; the questionnaire did not touch upon the issue of welfare because the conferences were devoted to the discussion of academic rather than economic matters.

and elsewhere.² They wish to learn more about recent developments in freshman and sophomore courses offered by Minnesota's baccalaureate institutions,³ and they would like to have opportunities to meet professors in four-year institutions as well as members of graduate faculties in subject-matter and general-liaison conferences.*

Junior college students, and how they learn, rank second in this hierarchy of interests. Faculty members ask for up-to-date information about recent gains in knowledge of the learning process.⁵ They would like to hear about new ways of attempting to motivate students,⁶ and they express curiosity about programmed learning⁷ and the special pedagogical problems posed by students of less than average ability.⁸ However, all of their attention is not absorbed by a single element in the student body; for their suggestions deal with means of providing for the gifted student,⁹ with the whole subject of ability groupings including the track system,¹⁰ and with remedial programs.¹¹

These faculty members are interested, then, in what they teach and whom they teach. To their great credit, they also are interested in how to teach well. They express interest in the whole subject of the preparation, orientation, and evaluation of junior college instructors.¹² Under this broad heading, they include pre-service education — what colleges and graduate schools should do to help prepare prospective teachers interested in junior college careers. They also want to explore such topics as in-service training, criteria for evaluating teacher performance in the classroom, and suggestions for keeping alive professionally. They would like to undertake, perhaps cooperatively, research projects leading toward increased understanding of junior college student characteristics, improved curricular patterns, and effective instructional practices.¹³

The questionnaires were being returned and the information they carried was being collected when the advisory committee and the committee planning the first conferences clanked through a change of gear. Roger H. Garrison, keynote speaker for the January meeting, came to Minneapolis on November 20, 1967, to act as program consultant. The kernel of his advice, based upon several years' experience in annual junior college faculty workshops held at Bennett College, Millbrook, New York, was to abandon the questionnaires for the moment. The best way to make sure that the participants would discuss their preferred topics was, he suggested, to arrange unstructured conferences. The committee planning the February meeting agreed to follow this suggestion. Norman C. Harris, keynote speaker for the third conference, concurred when he came to Minneapolis on January 19, 1968, to meet the committee in charge of the March meeting.

Instead of engaging a series of experts, lecturers, commentators, and oracles, and without arranging panels, reactors, and discussants, the three planning committees began to appoint discussion leaders and group recorders. These faculty members can be said to have had a workshop of their own in addition to the one at which they officiated. This is because the leaders met two or three times, and the recorders at least once, prior to the conference, in order to orient themselves to group process in unstructured discussion. These orientation meetings were led by Dr. Alan R. Anderson, Assistant Professor of Counselor Education in the University's College of Education. The leaders of the first conference received additional assistance from Virginia Satir of the Esalen Institute, Palo Alto, California, a nationally known consultant in communication and group interaction.

² 156

³ 152

⁴ 139. Some respondents listed certain authorities by name, and indicated the specific topics they would like to hear discussed. This information will be forwarded to the 1969 planning groups.

⁵ 133 ¹⁰ 135

⁶ 137 ¹¹ 131

⁷ 103 ¹² 152

⁸ 90 ¹³ 128

⁹ 134

Thus, thirty-six faculty members helped lead the conference participants in a total of six days of discussion. The reports which were prepared by most of the recorders, and which are presented in the proceedings of each of the conferences, constitute another source of information about Minnesota junior college faculty interests and concerns. As the printed reports show, the interests measured in the questionnaires are reflected in concerns expressed during the conferences — but with emendations and additions.

Aims: At least ten of the eighteen groups examined the topic of junior college missions, and reached conclusions of various kinds. Two of them concluded that the state system of public junior colleges in Minnesota lacks an explicit statement of purposes. One report contains this statement:

The group soon agreed that, to our knowledge, neither the Legislature nor the Junior College Board had made clear what the aims and goals of this system were. We decided that perhaps it was at least partially up to us as faculty to help determine what they should be. In addition, most of us thought that students also should be consulted on this question.¹⁴

Another report says:

We cannot assess our role until we have determined the actual goals of the junior college in general and of each institution in particular, and until we have a better understanding with the Junior College Board about financing programs.¹⁵

But still another view is that set patterns should be avoided. The individual junior colleges should avoid molds shaped by central agencies, and "be permitted to develop along the lines that will best meet the educational needs of the areas they serve."¹⁶

This uncertainty about aims is to be expected in a system which is in a youthful and formative stage. Most of the reports, however, present the view that the public junior colleges in Minnesota should be comprehensive in their aims.¹⁷ According to the classic formulation of the National Society for the Study of Education, this means that these institutions should offer occupational education and community services as well as academic programs for the two-year student and the pre-transfer student.¹⁸

Several groups coupled their acceptance or endorsement of these comprehensive aims with certain warnings and reservations. One report says, for example, that

in Minnesota we have attempted to initiate new programs too rapidly . . . we should do a better job of planning and financing such programs. We realize that the role of the community college is to serve the community. However, this should not be accomplished at the expense of existing programs.¹⁹

Some faculty members believe that neither faculty nor funds can be found to develop comprehensive programs in the smaller out-state schools.²⁰ Others take a different approach by suggesting a campaign to educate the public about the unique characteristics of the junior college in the hope that doing so will win acceptance and support for all aspects of the comprehensive mission from students, parents, and the community.²¹

¹⁴ See report of conference I, group 2. Hereafter, these reports will be cited as, e.g., I-2.

¹⁵ I-6; see also III-1.

¹⁶ II-2.

¹⁷ See, for example, I-3; II-2; III-1; III-6.

¹⁸ *The Public Junior College*. Fifty-fifth Yearbook of the National Society for the Study of Education, Chicago, 1956; part I, page 69.

¹⁹ III-6; see also II-2.

²⁰ II-2; III-6.

²¹ II-3; III-4; III-5.

Students and Counseling: The broad, inclusive aims of the comprehensive junior college, taken in conjunction with the open-door admission policy traditional in Minnesota's two-year public institutions, result in an extremely heterogeneous student body. Students of all ages, all levels of academic ability, and all conceivable educational objectives are represented. One recorder reports this discussion:

The group agreed, tentatively, that students in any given class have these characteristics in common: they are all human beings and hence share the same drives and needs; they are high-school graduates who speak a common language and share a common heritage; they attend the same institution, take the same course, have the same teacher, and want to complete the course successfully; they are curious. Some panelists called one of the similarities a difference: "They don't speak the same language." Within a single classroom, there are students who do not understand each other. Some are able to speak, or at least understand, the teacher's "language," and others cannot For some discussants, the "language differential" loomed large enough to reduce to insignificance the similarities, although most members were willing to grant at least lip service to the significance of the multitudinous similarities.²²

It was difficult to generalize about student-body characteristics, but it was easier to explain why students choose to enroll in a junior college:

Several out-state representatives reported that many of their students attended local junior colleges because they didn't want to leave home and/or because they couldn't afford to go away. Cost was also a factor for metropolitan-area students. Both metropolitan and out-state junior college representatives indicated that numerous students came to the junior colleges because their poor grades and/or low high-school rank barred their entrance to other schools. It was also noted that some students came to the junior colleges because they preferred a small school where they hoped to receive more individual attention. Finally, it was pointed out that while some students are capable of, and do, transfer to four-year colleges, almost two-thirds do not.²³

Some faculty members set the percentage of students who do not transfer at a somewhat higher figure.²⁴

The counselor has a vital role to play in an institution offering a variety of educational opportunities to a heterogeneous student population, although some statements indicate that there is a certain lack of understanding among instructors and counselors as to what this role should be.²⁵ Generally speaking, however, faculty members think that more counselors are needed and that these professionally trained persons should not be overburdened with routine tasks and administrative details.²⁶ They suggest close coordination of counseling and advising, with instructors assuming the task of helping students plan programs prior to registering, thus freeing counselors to concentrate upon those having significant academic, emotional, or vocational problems.²⁷

The faculty representatives were aware that the true lineaments of the junior college student cannot be traced in all this verbiage. They asked for inclusive and systematic investigations of student characteristics.²⁸ They suggested, too, that the counselors in each college might

²² I-4

²³ I-2

²⁴ I-3

²⁵ II-2; III-4; III-5

²⁶ II-6; II-2; III-4

²⁷ III-4; III-6

²⁸ II-2; II-3; II-6; III-5

undertake to collect, organize, and interpret data about students for the benefit of instructors and administrators.²⁹ They envision a comprehensive junior college expressly concerned with educating all of its students according to their respective interests and abilities — lest its open doors turn into revolving doors for a good many students.³⁰

Curriculum: The preceding concerns find a common denominator in the curriculum. In the words of one group report:

The junior colleges should do more to fit their programs to the needs of their students. We need the transfer programs set up at our institutions, but they seem to command greater attention than the programs set up for middle-ability students. We should do more for the latter, and work toward developing a curriculum which is not just a weakened version of the pre-transfer program.³¹

Another group said, "Why shouldn't we take into consideration the desires of students for course content? Everyone knows that students perform better when they are doing what they are interested in."³²

Faculty views of curricular matters vary from one extreme to the other. The conservatives ask, "Do we have an obligation to offer courses students want as opposed to what they need?"³³ Some of them have been "astonished to learn that in some colleges a student can earn the A.A. degree by taking courses almost all of which are developmental. Does this cheapen the A.A. degree?"³⁴ The liberals, on the other hand, warn against rigidity. They say that too often "course requirements are the end result of vested interests in building a department rather than a necessary part of education."³⁵ They believe that off-campus instruction and on-the-job training should be formally recognized facets of occupational education. They ask, "Does it matter what courses are taken so long as the student has the learning experience?"³⁶

It was probably generally true, as one group pointed out, that most faculty representatives "were more comfortable talking about transfer students and curriculum than about occupational-technical or general-studies programs."³⁷ Nevertheless, the participants appear to have been interested in vocational education. They realize that an important role in this aspect of post-high school education is assigned in Minnesota to area vocational schools. Many would like to merge junior college and area vocational school wherever possible.³⁸ There are more, however, who see the obstacles to merger to be insurmountable and who therefore recommend that the two institutions coordinate their activities, share faculty and facilities where feasible, survey community needs to determine tasks appropriate to each, and avoid the waste of resources which could come from unrestricted competition.³⁹

Several faculty members feel restricted in their attempts at curricular innovation. As one report puts it:

Concern was expressed over the conflict between the desire to be creative in developing local curriculums and the traditional standards of the colleges to which students transfer. The group agreed that senior institutions should determine eligibility for transfer, but that this procedure coerces the junior college teacher who would like to fit his course to the student.⁴⁰

²⁹ II-2

³⁰ III-2; II-4

³¹ III-5

³² I-1; see also III-4; III-6; II-3.

³³ I-1

³⁴ III-6

³⁵ I-3; I-6

³⁶ II-3

³⁷ II-4

³⁸ III-4; III-5

³⁹ I-2; I-3; II-3; III-1; III-2; III-3; III-4

⁴⁰ II-4

These faculty members recognize the need to make changes in the traditional liberal arts core of the curriculum, but they feel that transfer topics are matters they can only contemplate and deplore. They do not, after all, control the advanced standing credits awarded their students who transfer to a baccalaureate institution. In addition, one group heard evidence that "teachers whose strength lay in the ability to innovate were discouraged (fired). Despite their protestations to the contrary, some administrators do not encourage innovation and might be made more tolerant of it if they were to participate in conferences like this one."⁴¹

Ability grouping, or the track system, came in for a good deal of discussion. Some faculty members "view their colleges as feeder institutions for four-year colleges and therefore do not believe in lower-track education." They look at terminal track courses as watered-down versions of the arts for "kids who can't cut it" in transfer programs.⁴² They say that "there is too much emphasis upon getting the inferior students into classes with other inferior students." And they ask, "If we feel that what is being done for transfer students is good, why not give the nontransfer students the same thing?"⁴³ Other faculty members, however, expressed a different view. They were interested in the track system and wanted to hear about it. They wished to know the degree to which the plan is flexible: can a student transfer from one track to another without losing credits? They inquired whether or not a student loses his freedom of choice by being forced into one track or another because of grades or aptitude-test scores. They asked: "How would we determine for which track a course was suitable?" And: "Should the same degree be given for all tracks?"⁴⁴

There were few, if any, final pronouncements on curricular matters at the conferences. But there were many questions:

Since it is impossible for our schools to cover all areas of students' educational needs — once we have determined, if we can, what those needs are — we should find out which areas are the most essential. We noted that certain courses are already in the curriculum, the need for such having been determined by administrators, by faculty, by the public; such courses thus become students' needs. English composition and physical education are such courses. We asked: Why isn't art a required course? or music? And why do we make the assumption that certain people are the only ones qualified to teach some courses? Why do persons who have a background in English literature teach composition? Why not let someone with a background in, for example, history teach composition? We felt that we must examine our rigid patterns to see what should and could be changed, such as structuring courses to allow students to come in at any time instead of at the beginning of a present sequence course, and setting up interdisciplinary courses. We also felt that, as our culture becomes more and more sophisticated, other courses such as art will probably become required courses.⁴⁵

Instruction: Discussion of students and curriculum led very naturally to how-to-do-it talk about teaching methods. Familiar and expected topics were canvassed. The conferees, for example, threw brickbats at teachers who lecture too much, and recommended the use of various other methods of presenting classroom materials;⁴⁶ complained that most textbooks are not suitable for use in junior college classes;⁴⁷ expressed considerable interest in pass/no credit

⁴¹ I-4

⁴² II-6

⁴³ I-1

⁴⁴ I-2; III-5

⁴⁵ I-3

⁴⁶ II-2; II-3; III-2

⁴⁷ II-2; III-5

grading;⁴⁸ endorsed audio-visual methods;⁴⁹ and looked hopefully to programmed instruction as a means of offering self-paced courses, independent study, remedial work, or the additional track which neither faculty nor budget could cover any other way.⁵⁰

Fortunately, the discussions were not limited to details. "What is good teaching?" one group asked. "Should we 'mold' students into what we think they should be, or should we allow them to experiment and explore?"⁵¹ Another group reported crisply its conclusion that "true teaching effectiveness is determined through direct observation of student growth. This is not to be thought of in relation to testing and compiling grades, but should involve an understanding of changes in attitudes, values, and responses."⁵² Still another group said that making students excited about ideas is the hardest kind of teaching. It concluded by remarking that "good teaching should essentially allow a teacher to disappear in a course."⁵³

Teaching is as much art as anything else, and it is difficult to talk about an art without indulging in clichés. One of several groups succeeded in approaching the topic of teaching in particularly fresh and original terms. It asked, "How much joy is there, or should there be, in the classroom?" And it answered:

Although several discussants insisted that a little drudgery (sometimes called "work") never hurt anyone, all agreed, at least in principle, that learning should be joyful. Questions such as the following were asked and sometimes discussed but not answered:

1. Does it matter whether a student enjoys a particular course?
2. Can a good teacher make "unenjoyable" subjects enjoyable? Should he? Does it make any difference?
3. What about the student who finds joy in a subject not in the classroom, but years later, long after he has "had the course"?
4. Should a teacher be an entertainer?
5. Should a teacher assign readings that students will enjoy, or should he assign those that he believes a student ought to read?

The same group also asked, "Has a teacher ever helped anyone?" It replied, predictably enough, that "teachers have helped, do help, and are necessary." But then its members went on to say,

What they are necessary for, however, was a matter for dispute. Is a teacher a grade-giving device? Is it possible for him to influence values? Is it within his province to attempt to do so? . . . Is it the teacher's job to pose problems, to resolve them, or to do both? Should he teach his subject (the music and poetry of Wagner's *Ring*, for example, or "how to play a bassoon") and only his subject (avoiding the political implications of the *Ring*, or the "meaning of bassoonery")? Even if a teacher knows what his goals are, how does he know whether he attains them? Does he have time to do what he wants to do? Should he do what he wants to do, or what he thinks "ought to be done"?⁵⁴

Such provocative and stimulating questions remind us that effective teaching requires subtle skills which appear to result from a combination of intuition and training. The junior college instructor, many of the conferees declared, should have a special kind of preparation for his work. This training, they agree, should stress customary graduate-school subject-

⁴⁸ I-1; I-2; I-3; I-5

⁴⁹ I-2; I-3

⁵⁰ II-4; III-4

⁵¹ I-1

⁵² I-5

⁵³ I-3

⁵⁴ I-4

matter concentration rather than formal education-department teacher-training courses. They suggest that the introduction to the junior college classroom should be practical rather than theoretical. It could be accomplished by means of observation, practice, and supervised internships.⁵⁵

Four suggestions about in-service and pre-service orientation for junior college faculty were forthcoming from one group:

The first was that it would be very valuable to send faculty members to other colleges around the state and/or the country to observe teaching methods at these schools. The second was . . . to set up an internship-teaching training program for new junior college instructors Further, it was suggested that . . . [we] junior colleges might do both ourselves and the baccalaureate institutions a service if we would tell them what kind of people we need and what kind of training we thought these people should have. Finally, it was suggested that more money and time should be made available to instructors who wish to take additional courses or attend summer institutes.⁵⁶

These faculty members warned, however, that, whatever the training device, "junior college teachers wish to have a controlling voice concerning the preparation of new members entering their profession [they] should not resign their responsibilities for the educational preparation of junior college teachers to an agency totally outside their control."⁵⁷

A Junior College Center: These considerations about teacher preparation are closely related to the idea of a special center which would be devoted to fostering the development of Minnesota's junior colleges, and which could be established on one of the University, state-college, or private-college campuses if funds were forthcoming. The conference groups were interested in this idea, but concerned about how it might be implemented.

The faculty representatives are precise and emphatic on three points relating to the planning and organization of a possible junior college center. First, junior college instructors must have a deciding voice in committees planning such a center and operating it after it has been established.⁵⁸ Second, it should be a service organization, not a policy-making agency.⁵⁹ Third, it should not be an arm of a graduate school, education department, or single institution such as the University.⁶⁰ In this connection one group remarked that, if such a center were located on the University campus, it would be in danger of being dominated by the University; if it were located elsewhere, it might lose effectiveness.⁶¹ Another group suggested that the center might serve an entire region rather than the State of Minnesota.⁶²

The faculty representatives say in their group reports that a junior college center could be useful to them in many different ways. For example, it could become a clearing house for new ideas and a means of facilitating and improving instruction by collecting and circulating publications, films, and movable expensive or seldom-used laboratory equipment as well as other teaching aids.⁶³ Faculty orientation, voluntary in-service training, and even graduate course work could be offered by center-sponsored television, workshops, institutes, conferences, and summer sessions.⁶⁴ The center might provide liaison between junior colleges and four-year

⁵⁵ I-5; I-6; II-2; II-6

⁵⁶ I-2; see also II-2 and III-5

⁵⁷ II-2; see also I-6

⁵⁸ II-2; II-6; III-2; III-5; III-6

⁵⁹ III-2; III-4; III-6;

⁶⁰ II-6; III-2; III-4; III-5; III-6

⁶¹ III-2

⁶² III-5

⁶³ III-1; III-2; III-5; III-6

⁶⁴ I-2; II-3; III-1; III-2; III-5

institutions, especially in such matters as transfer, scholarships, and program articulation.⁶⁵ It could undertake cooperative research projects,⁶⁶ and it could promote in the junior colleges the various possible uses of modern communication media such as closed-circuit television, telewriter, and Wide Area Telephone Service (WATS).⁶⁷

Junior college aims, students and counseling, curriculum and instruction, and the creation of a junior college center — these were the topics most discussed at the three Minnesota Junior College Faculty Conferences held in 1968 on the campus of the University of Minnesota. If this summary of the interests and concerns expressed by the faculty representatives during the discussions appears truncated, perhaps it is because few generalizations or conclusions are presented in it. Each section is open-ended because, as several of the reports point out, more questions were asked than answered. The conferences were a good beginning — but only a beginning.

This is as it should be. The purpose both of the early questionnaires and of the unstructured conference sessions was to map the areas which junior college faculty in Minnesota think and talk about when left to their own devices, and which therefore they might be interested in exploring in the future. The University of Minnesota is working toward making further exploration possible during 1969.

⁶⁵ III-6

⁶⁶ II-3; III-5

⁶⁷ III-2; III-5

SECTION 5

CONFERENCE STATISTICS

I. Attendance

	Private	Public	University	Total
Conference I	8	54	7	69
Conference II	5	54	7	66
Conference III	5	55	8	68
	—	—	—	—
Total	18	163	22	203

Note: This means that approximately one-third of those teaching and working in Minnesota's public and private junior colleges attended one of the conferences. This estimate is based upon a total academic staff (instruction and administration) of 648 full time equivalent, given in Table XVI, page 25, University of Minnesota Bureau of Institutional Research, *Fourteenth Annual Survey of Minnesota College and University Enrollments*, November, 1967.

II. Institutions Represented

Private Junior Colleges	Conference I	II	III
Bethany Lutheran	x	x	x
Corbett College	x	—	—
Golden Valley Lutheran	x	x	x
St. Mary's Junior College	x	x	x

Public Junior Colleges

(All of the public junior colleges in operation in Minnesota in 1968 were represented at all three of the conferences with one exception in the case of one conference.)

The list is as follows:

Anoka-Ramsey	Hibbing	Metropolitan	Rochester
Austin	Itasca	North Hennepin	Vermilion
Brainerd	Lakewood	Northland	Willmar
Fergus Falls	Mesabi	Rainy River	Worthington

Summary of Attendance by Institution

	Conference I	II	III
Private	4	3	3
Public	16	16	15

Note: There were sixteen public junior colleges in operation in Minnesota during the 1967-1968 academic year. It is customary to say that there were six private junior colleges in the state during that same period, but two of these are highly specialized in that they concentrate upon the education of possible candidates for orders or the priesthood in the Roman Catholic Church. Because of the special purposes their institutions serve, the presidents of Crosier Seminary and Nazareth Hall did not accept invitations to send representatives to the conferences.

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